

Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS

Please visit www.fordperformanceparts.com for the most current instruction and warranty information.

PLEASE READ ALL OF THE FOLLOWING INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION. AT ANY TIME YOU DO NOT UNDERSTAND THE INSTRUCTIONS, PLEASE CALL THE FORD PERFORMANCE TECHLINE AT 1-800-367-3788

The use of a floor hoist is recommended for this installation. If you do not have access to one, use a hydraulic floor jack and jack stands to raise the vehicle.

!!!CAUTION: JACK STANDS MUST BE USED ON A LEVEL SURFACE AND BE SECURELY SEATED. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY OR VEHICLE DAMAGE!!!





Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS

Requires M-7000-M8S GT350 Transmission with Integral Pump

KIT INCLUDES:

Qty. 1	Transmission Cooler
Qty. 1	Bolt, Cooler to Body
Qty. 1	Bolt, Cooler to Fender
Qty. 1	Bracket
Qty. 1	U Nut, Cooler Bracket to Body
Qty. 1	Bolt, Cooler Bracket to body
Qty. 2	Bolt, Bracket to Cooler
Qty. 1	Lines, From Transmission
Qty. 1	Lines, From Cooler
Qty. 2	Bolt, Lines to Transmission
Qty. 1	Bolt, Bracket to Core
Qty. 4	Secondary Retaining Clip
Qty. 1	Nut, Bracket to Core Support
Qty. 1	Core Bracket
Qty. 1	Nut, Transmission Line to Bellhousing
Qty. 1	Nut, Transmission Line to Engine
Qty. 3	Driveshaft Bolts (Differential End)
Qty. 4	Driveshaft Bolts (Transmission End)
Qty. 1	Thread Locker
Qty. 2	Bolts, Driveshaft Center Bearing to Body
Qty. 2	Nuts, Catalyst to Exhaust Manifold



Part Description: GT350 Transmission Cooler Kit with

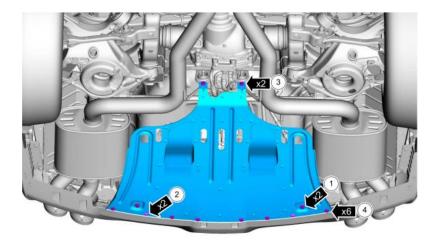
Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS

WARNING: Do not breathe dust or use compressed air to blow dust from storage containers or friction components. Remove dust using government-approved techniques. Friction component dust may be a cancer and lung disease hazard. Exposure to potentially hazardous components may occur if dusts are created during repair of friction components, such as brake pads and clutch discs. Exposure may also cause irritation to skin, eyes and respiratory tract, and may cause allergic reactions and/or may lead to other chronic health effects. If irritation persists, seek medical attention or advice. Failure to follow these instructions may result in serious personal injury.

- Disconnect the battery.
- 2. Lift the Vehicle to a comfortable height to work beneath it.

Remove Mufflers and Tailpipes



E218938

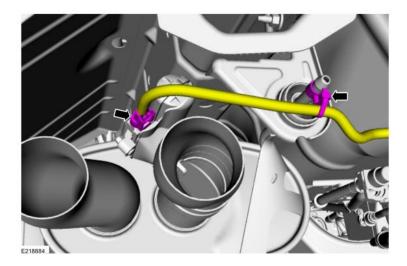
- 3. Remove the rear underbody shield rear bolts.
 - Torque: 80 lb.in (9 Nm)
- 4. Remove the rear under body shield push pin retainers.
- 5. Remove the rear underbody shield front bolts.
 - **Torque: 22 lb.ft (30 Nm)**
- **6.** Remove the rear under body shield rivet style push pin retainers.



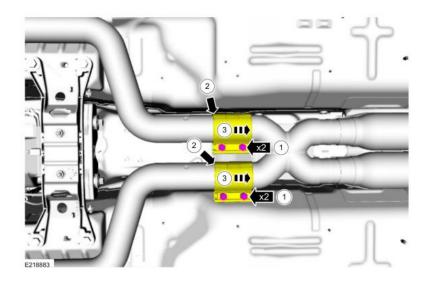
Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



7. Disconnect the <u>LH</u> and <u>RH</u> tailpipe actuator electrical connectors. Detach the wiring retainers.



Loosen the LH and RH clamp nuts.

Torque: 35 lb.ft (48 Nm)

Release the locking tabs on the clamps.

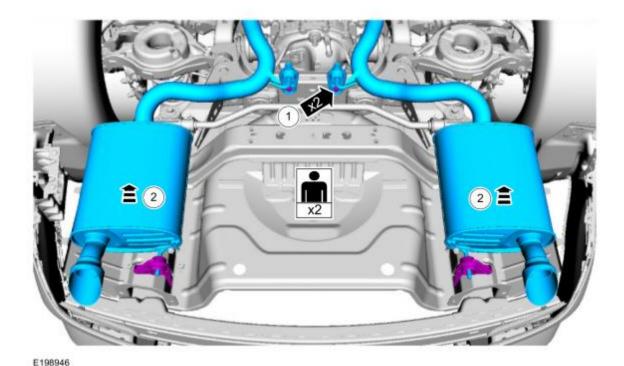
Position the clamps rearward.



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



8. Remove the LH and RH rear exhaust hanger isolator bracket bolts from the rear subframe. Torque: 18 lb.ft (25 Nm)

Unhook the rear exhaust hanger isolators and remove the muffler and tailpipe.



Part Description: GT350 Transmission Cooler Kit with

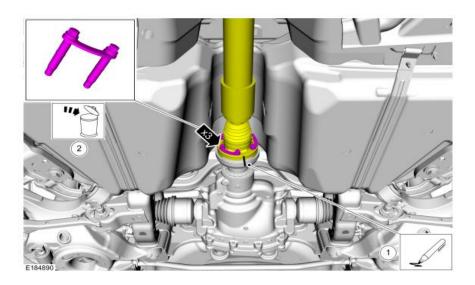
Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS

Drive Shaft Removal

NOTE: The maximum articulation of the flex coupling is 4 degrees. The maximum articulation of any u-joint is 15 degrees. If the flex coupling or any u-joint of the driveshaft is articulated further than the maximum allowable degrees damage may occur.

9. Index mark the driveshaft and the pinion flange for reference during installation



10. Remove and discard the driveshaft to pinion flange bolts.

NOTICE: Do not over articulate the driveshaft or damage may occur.

Support the driveshaft.

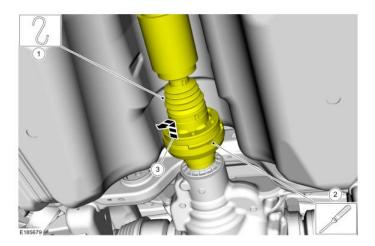
NOTE: The driveshaft coupler is a tight fit, and may not be able to remove from the PTU coupler until the center bearing retainers are removed.



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

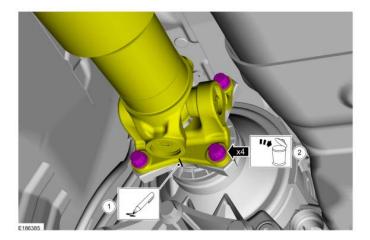
NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



11. Using a screwdriver inserted into the slot on the pinion flange, pry the driveshaft from the pinion flange.

Separate the driveshaft from the pinion flange.

NOTICE: Do not over articulate the driveshaft or damage may occur.



12. If equipped with 4 bolt flange.

Mark the driveshaft to the transmission flange.

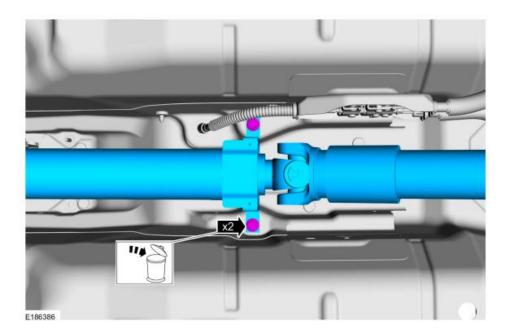
Remove and discard the driveshaft to transmission flange bolts. Position and support the driveshaft aside.



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



NOTICE: The help of an assistant may be needed. Do not over articulate the driveshaft or damage may occur.

If equipped.

Remove and discard the driveshaft center bearing bolts and remove the driveshaft.

Remove the RH Catalytic Convertor

NOTE: If the catalytic converter is not being replaced, the catalyst monitor sensor does not need to be removed from the catalytic converter. Disconnecting the electrical connector is still necessary.

NOTE: Removal steps in this procedure may contain installation details.

NOTE: Clean all exhaust connections before reassembly.

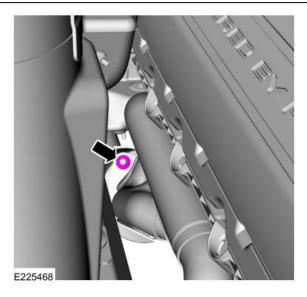
13. Disconnect the catalyst monitor sensor electrical connector and detach the wiring retainer.



Part Description: GT350 Transmission Cooler Kit with

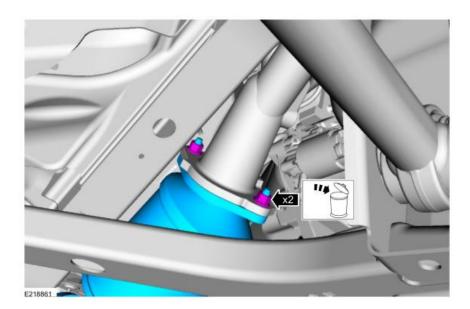
Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



14. Remove the upper RH catalytic converter nut.

NOTE: During assembly, tighten the catalytic converter nuts evenly. Torque: 35 lb.ft (48 Nm)



TIP! This Nut will be easier to access from the top side with a long extension as there is minimal room under the car for removal

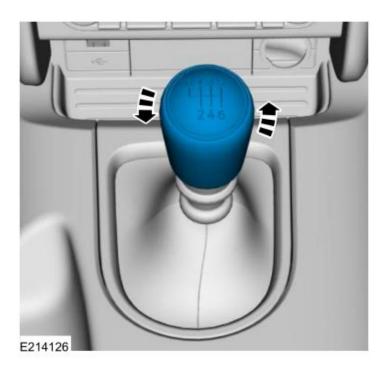


Part Description: GT350 Transmission Cooler Kit with

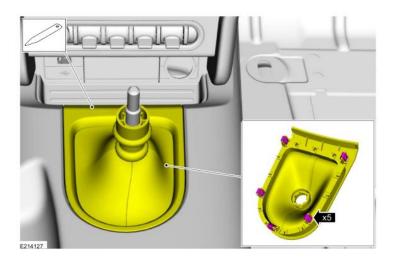
Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS

Remove the gearshift lever



15. Rotate the gearshift knob counterclockwise and remove the gearshift knob.



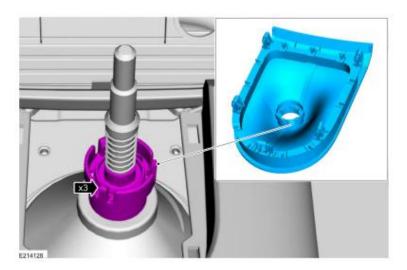
16. Using an interior trim remover, release the gearshift lever boot from the floor console starting at the front sides and moving rearward.



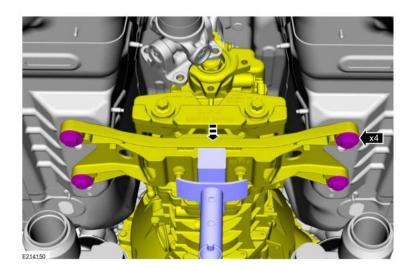
Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



17. Release the retainers and remove the gearshift lever boot.



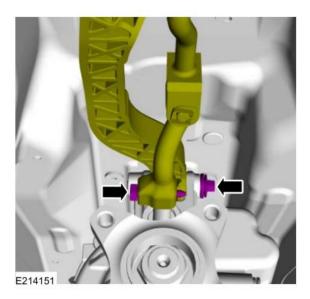
18. Support the cross member with a transmission jack, remove the cross member bolts and lower the transmission.



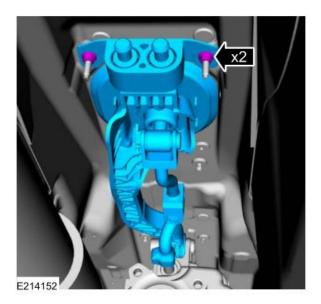
Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



19. Remove the gearshift lever assembly bolts.



- 20. Remove the nuts and the gearshift lever assembly.
- 21. Re-install the Cross Member Bolts loosely. The Rear Transmission Mount/ Cross Member will need to be removed in later steps

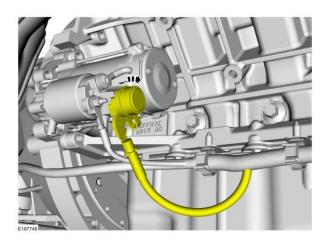


Part Description: GT350 Transmission Cooler Kit with

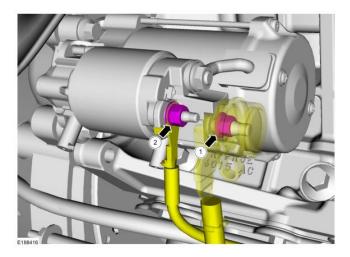
Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS

Remove the starter motor.



22. Open the starter motor solenoid battery cable cover.



23. Remove the starter motor solenoid battery cable nut and then disconnect the starter motor solenoid battery cable.

Torque: 106 lb.in (12 Nm)

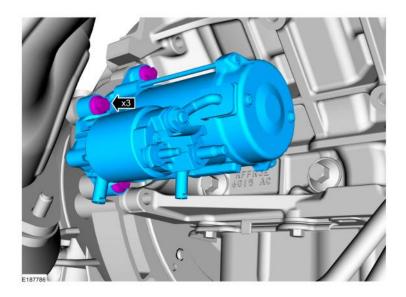
24. Remove the starter motor solenoid wire nut and then disconnect the starter motor solenoid wire. *Torque*: 53 lb.in (6 Nm)



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



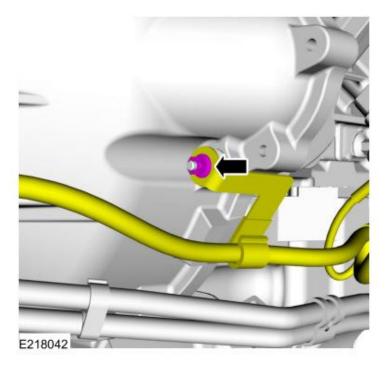
- 25. Remove the starter motor mounting bolts and then remove the starter motor. *Torque*: 18 lb.ft (25 Nm)
- 26. Inspect the starter motor drive gear and flywheel ring gear.
- 27. To install, reverse the removal procedure.



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



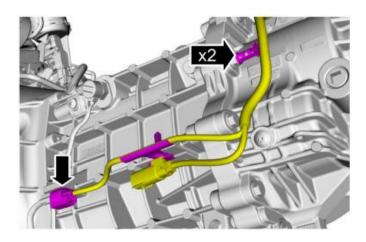
28. Remove the LH catalyst monitor sensor.

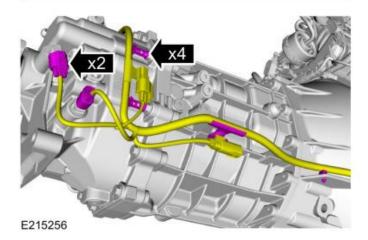


Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS





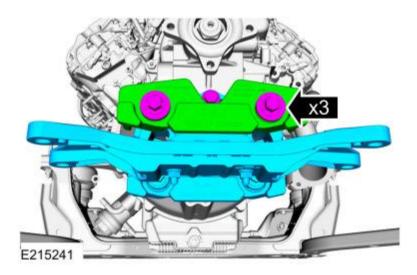
- **29.** Disconnect the electrical connectors and the wiring harness retainers and position the wiring harness aside.
- **30.** Support the transmission with a transmission jack and secure it with a safety strap.



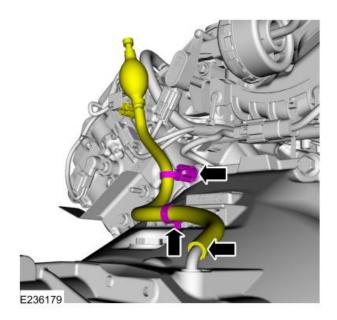
Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



31. Remove the bolts and remove the transmission support insulator, damper and cross member from the rear of the transmission.



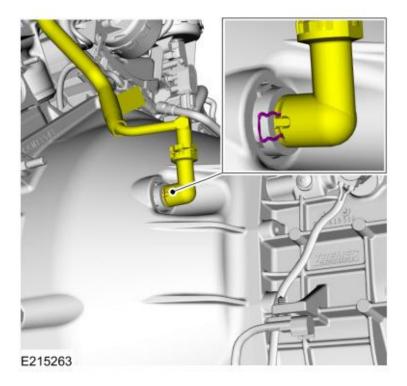
32. Remove the vent tube from the transmission.



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



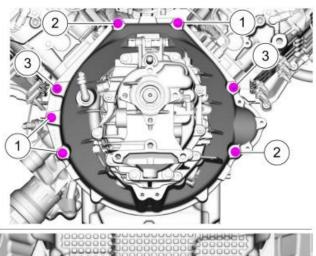
33. Remove the retainer and disconnect the hydraulic tube from the clutch master cylinder.

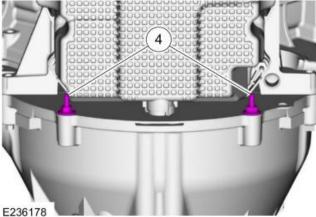


Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS





34. NOTE: Note the location of the different length bolts and studbolts for assembly.

Remove the bellhousing bolts, pull the transmission back to remove the input shaft from the clutch, lower the transmission and remove it from the vehicle.

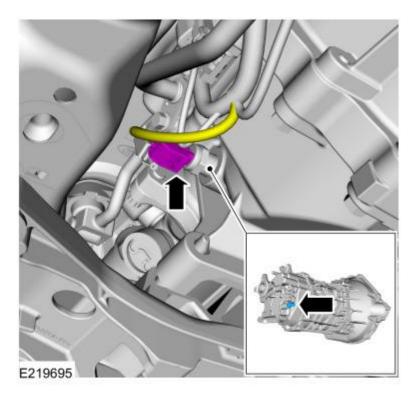
- 1. 60 mm Bolt
- 2. 60 mm Studbolt
- 3. 75 mm Studbolt
- 4. 25 mm Studbolt



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



- 35. Locate and remove the TFT (Transmission Fluid Temperature) Sensor from the original Transmission and install the Sensor in the new Transmission *Torque:97 in/lb (11 N.m.)*
- 36. Install the new Transmission in the reverse order

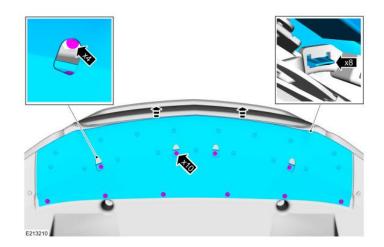


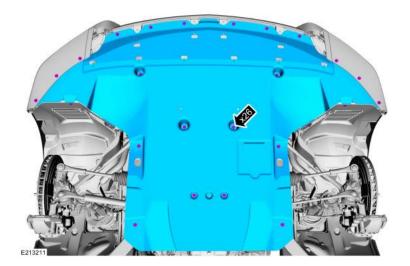
Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS

Install the Transmission Cooler Core and Tubing





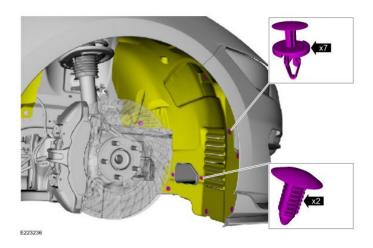
- 37. Remove the bolts and the underbody shield.
- 38. Remove RH front wheel and tire.



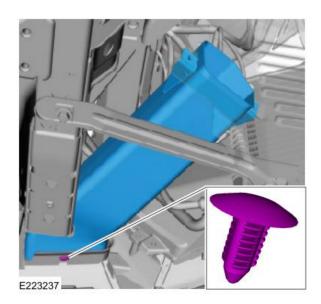
Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



39. Remove the pushpins and position the splash shield aside.



40. Remove the pushpin and the RH brake cooling pipe.



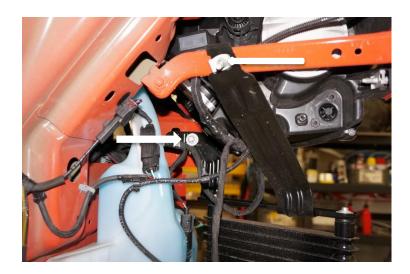
Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



41. Working from the RH Wheel well, locate and remove the Core Support to Body Bolt



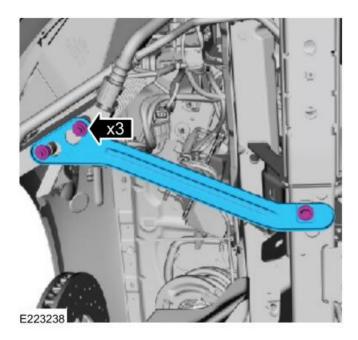
- **42.** Install the Transmission Cooler Core from the RH Wheel Well. Notice the two mounting points have small tabs. When the Core is in the correct location, the mounting tabs will sit flush with the surface.
- **43.** Use one of the supplied Bolts from this kit and re-use the Bolt you just removed in the previous step. Do not tighten these bolts at this time.



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



- **44.** Using the supplied Hardware, install the lower cooler core bracket to the bottom of the core as well as to the front sub frame using the provided U Nut and Bolt. Tighten these three (3) Bolts *Torque:* **89 in/Lb (10 N.m)**
- **45.** Tighten the upper bracket to the core support Bolt

Torque: 177 in/lb (20 N.m)

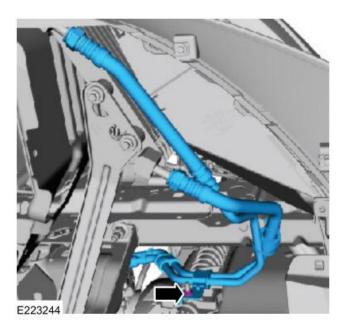
46. Tighten the upper Bracket to Fender Bolt *Torque*: **177 in/lb (20 N.m)**



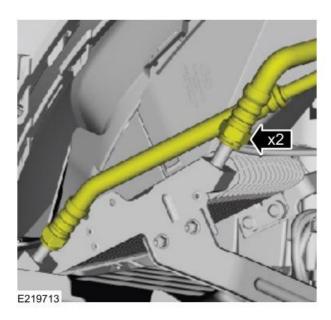
Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



47. Install the front transmission fluid cooler tubes and install the front transmission fluid cooler tube nut. *Torque*: 89 lb.in (10 Nm)



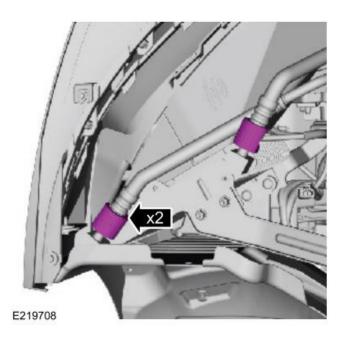
48. Connect the transmission fluid cooler tubes.



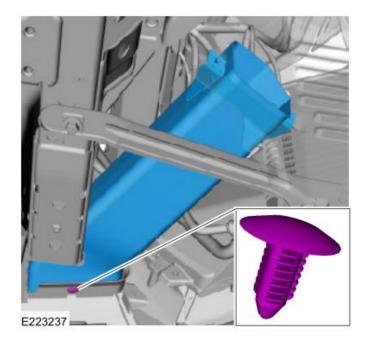
Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



49. Install the secondary latches.



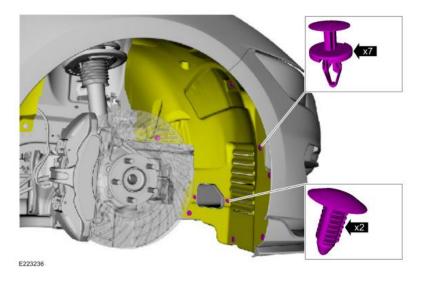
50. Install the RH brake cooling pipe and the pushpin.



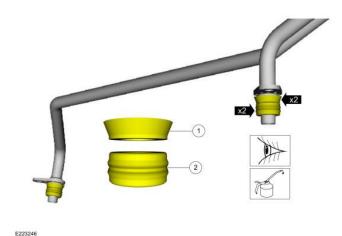
Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



51. Position the splash shield and install the pushpins.



52. Inspect and lubricate the band seals and backing rings on the Transmission Pipes.

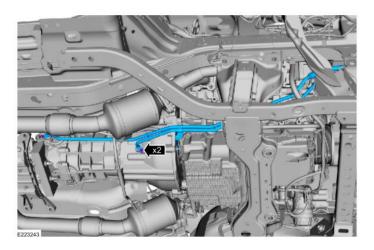
Material: Motorcraft® MERCON® LV Automatic Transmission Fluid / XT-10-QLVC (MERCON® LV) (WSS-M2C938-A)



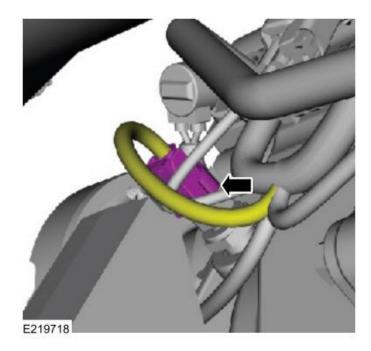
Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



53. Install the rear transmission fluid cooler tubes and the bolts. *Torque*: **89 lb.in (10 Nm)**



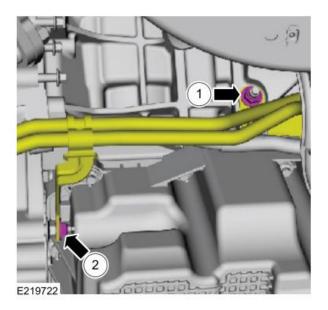
54. Connect the transmission fluid temperature sensor electrical connector.



Part Description: GT350 Transmission Cooler Kit with

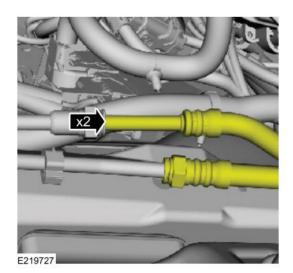
Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



55. Install the rear transmission fluid cooler tubes bracket nuts.

Torque: 35 lb.ft (48 Nm)
Torque: 89 lb.in (10 Nm)



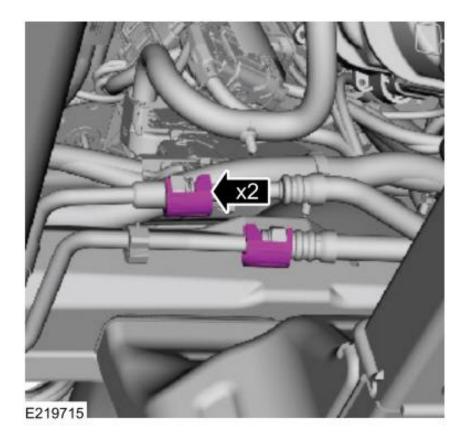
56. Connect the rear transmission fluid cooler tubes to the front transmission fluid cooler tubes.



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



57. Install the transmission fluid cooler tubes secondary latches.



Part Description: GT350 Transmission Cooler Kit with

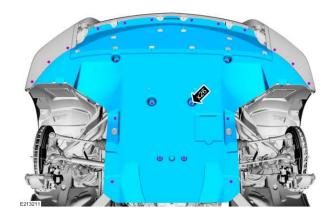
Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS

Reassembly

Refer to the previous instructions as the reassembly will be the reverse procedures of dis-assembly. The proper Torque Specs can also be found there.

- 58. Install Shifter
- 59. Install Driveshaft
- **60.** Install RH Catalytic Convertor (*tighten the flange nuts evenly*)
- 61. Install the Exhaust/ Muffler System and connect Electric Exhaust Valves
- 62. Install Rear Diffuser

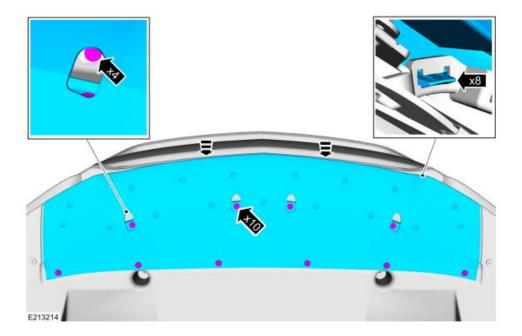




Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



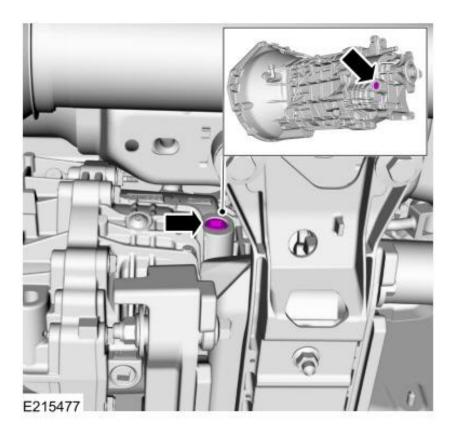
63. Install the underbody shield and the bolts.



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS



- **64.** Remove the fill plug on the Left side of the Transmission
- 65. Fill the transmission to the bottom of the fill hole. (*Use Motorcraft Mercon LV XT-10-QLVC Automatic Transmissions Fluid Cap. 3.3 qts. with Trans Cooler*)
- 66. Loosely install the fill plug.
- 67. Bleed the Clutch/Brake Master Cylinder

WARNING: Carefully read cautionary information on product label. For emergency medical information seek medical advice. In the USA or Canada on Ford/Motorcraft products call the Poison Control Center at: 1-800-959-3673. For additional information, consult the product Material Safety Data Sheet (MSDS) if available. Failure to follow these instructions may result in serious personal injury.

NOTICE: Do not spill brake fluid on painted or plastic surfaces or damage to the surface may occur. If brake fluid is spilled onto a painted or plastic surface, immediately wash the surface with water.



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS

- 1. Make sure all hydraulic tubes are correctly seated.
- 2. Make sure the clutch pedal is in the most upward position.
- 3. Check the fluid level of the brake/clutch reservoir. Fill the reservoir with the specified fluid to the MAX mark.

Material: Motorcraft® DOT 4 LV High Performance Motor Vehicle Brake Fluid / PM-20 (WSS-M6C65- A2)

- 4. Using a suitable bleeder kit and a Vacuum Pump Kit, install the rubber stopper in the reservoir opening. Make sure the rubber stopper has a tight fit. Alternate method: use a 50 mm (1.96 in) rubber stopper with an 8 mm (0.31 in) pipe inserted through the rubber stopper. Use the General Equipment: Brake/Clutch System Pressure Bleeder/Filler
- 5. Holding the rubber stopper in place, operate the vacuum pump to 15-20 inches of vacuum. Hold the vacuum for one minute, then quickly relieve the vacuum. Remove the special tools.
- 6. Check the fluid level of the reservoir. Fill the reservoir with the specified fluid to the MAX mark. Install the reservoir cap.
- 7. Press and release the clutch pedal 10 to 12 times or until clutch pedal effort is consistent and positive at top of clutch pedal travel.
- 8. Repeat Steps 4 through 7 two additional times or until clutch pedal effort is consistent and positive at The top of clutch pedal travel.
- 9. Install the reservoir cap.
- 10. Check the clutch pedal reserve. Test the clutch system for normal operation.

NOTICE: Vehicles equipped with a transmission fluid cooler must be started and run for 2 minutes with the clutch engaged (clutch pedal released) to allow the transmission fluid to circulate through the transmission fluid cooling system or the transmission will be under filled.



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS

- **68.** Re-Connect the Battery.
- **69.** With the Vehicle still raised, start the engine and allow the engine to idle for 2 minutes with **the clutch engaged**.
- 70. Turn the engine off.
- 71. Remove the Fill Plug and top off the transmission to the bottom of the fill hole.
- **72.** Apply thread sealer to the fill plug. Install the fill plug.
- **73.** Install and torque the RF wheel *Torque:* **148 ft/lb.**
- 74. Lower the vehicle



Part Description: GT350 Transmission Cooler Kit with

Transmission Installation Instructions

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD PERFORMANCE PARTS

Notes

Factory Ford shop manuals are available from Helm Publications, 1-800-782-4356

Techline 1-800-367-3788 Page 36 of 36 IS-1850-0561